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Christian Medical Commission World Council of Churches 150 Route de Ferney 1211 Geneva 20 Switzerland

Self-Reliance And Nutrition

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"The well-being of the peoples of the world largely depends on the adequate production and distribution of food..." *(Declaration on the Eradication of Hunger and Malnutrition* — World Food Conference, Rome, November 1974)

Pictures of starving babies commonly introduce nutrition articles or journals which then go on to talk about a world food crisis and protein gap and leave the reader with the uncomfortable feeling that this is a problem too large to be tackled. Some end on an optimistic note, looking towards the "one solution" the authors have found to solve hunger in the world, which is either the use of soya beans, leaf protein, fish flour, or some other product which needs to be processed, made acceptable, and then finally introduced into people's diet. The enthusiastic nutritionist tends to forget that not all people in poor countries are malnourished and that most of them produce food in quite sufficient quantities for themselves and their children. But the poor people in poor countries are poorer than poor people in rich countries. There are more of them, and more of them are malnourished. "The basic fact about the nutrition problem is that it is primarily a poverty problem: a problem of ineffective demand rather than of ineffective supply; for food not just for protein.

"Most of those suffering from protein deficiency eat more than enough protein to meet their protein requirements. However, because they do not eat, in total, enough food calories, the protein that they eat is not utilized as protein for maintenance of body tissue but as calories to supply their energy needs. People whose calorie intakes are adequate are not generally to be found suffering from protein deficiencies." (Professor L. Joy, "Food and Nutrition Planning", *Institute of Development Studies Reprint No. 107,* 1973.)

General food production is low in poor countries, so it seemed a logical step to try to increase food production in poor countries. The Green Revolution, which resulted in increased agricultural production in Europe and North America, was propagated in poor countries.

"The Green Revolution is an agricultural package with modern technology designed to increase food production. Its ingredients are hybrid seeds, tractors, harvesting and drying equipment, irrigation, fertilizers, pesticides, and herbicides. The Green Revolution has, of course, been accompanied by the need to have access to large sums of capital for capital intensive agriculture. In a sense, it has been the exporting abroad of the techniques and tools of Western agribusiness." (N.J. Faramelli, "Famine: The International Dimensions of the Food crisis", *Journal for Current Social Issues,* Fall 1974, published by the United Church Board for Homeland Ministries, New York.)

"The Green Revolution... has provided only a partial solution to the problem. The increased production, mainly in irrigated areas, bolsters national economies and benefits the landlords and traders. But, too often, the farmers and their families go to bed hungry." (World Health Organization, *Features,* No. 6, July 1971)

The Green Revolution has so far failed to improve the nutritional needs of the poorest and more vulnerable groups. But it has "placed a steadily growing part of agricultural production, processing, and distribution in the hands of large multinational agribusinesses. The results are large production units, mechanization, a shift from diversified agricultural production to monocultures, the establishment of large food processing factories, and the expansion of markets for agricultural export... Monocultures replace the former diversified agricultural production with the ensuing vulnerability to pressure and recurrent shortage... The individual farmers are removed from decision making; they become objects and production factors rather than participants in development. Self-reliant agricultural development, on the other hand, ... encourages the use and development of local initiatives and decision making. It uses skills and relevant traditional knowledge in production and processing. Peasants become individually and collectively responsible for all phases and levels of their work, rather than extensions of an impersonal corporate machine... Much too little is done to encourage new initiatives in this field, or to continue and improve existing practices... Self-reliance should be in the smallest possible units: the maintenance wherever possible of local food production for local consumption and a minimal dependence on food trade." (Asbjørn Eide, "Planting Every Inch", *Ceres* January-February 1975)

The present issue of CONTACT tries to illustrate the two points made above — firstly with an article on "self-reliance": what it means, and how it could be achieved, and secondly with an article which demonstrates that there are ways to promote self-reliance in the field of nutrition. The example is African, but the same principles can be applied to most other lesser developed countries.

HEALTH CARE IN THE CONTEXT OF SELF-RELIANT DEVELOPMENT

Professor Dr Samuel L. Parmar

(Dr Samuel L. Parmar is of Indian nationality, and is Reader in International Economics at Allahabad University, and Principal of William Holland University College at Allahabad, Uttar Pradesh, India.

From 1964-1967, Dr Parmar was on the faculty of the Ecumenical Institute, the World Council of Churches' school of advanced study at the Château de Bossey near Geneva. He served first as Assistant and then as Associate Director of the Institute.)

I. Health is not just a matter of providing hospitals, medical experts, and medicines. Many facilities introduced under governmental or private auspices in developing countries fail to reach the needy sectors. They tend to be appropriated by the groups with social influence, economic power and political pull, by the privileged minorities. Thus, potentially praiseworthy efforts for the good of the "common man" remain limited to the existing power groups, and the people they are meant to serve are often excluded. Unless ordinary people can be motivated and mobilized to act together and resist the domination of the traditionally powerful, the majority in developing countries will remain at the margin of social services. Problems of health care in developing countries are, therefore, linked with the socio-economic problems of that society and are linked with the power structures which exist in the society.

A number of new experimental programmes and development projects have been initiated by Christian organizations in developing countries. These have received substantial support from donor agencies in developed countries in the West. It was hoped that these programmes would become self-supporting and provide examples of self-reliance and successful participation by the people. Instead, most of these programmes tend to become new institutions, depending almost wholly on larger injections of funds from outside, and gradually developing all the characteristics of the traditional institutions which they were designed to replace. In any form of social organization, we naturally need institutions, but if these become symbols of power and patronage, or instruments for creating a new elite, or an end in themselves to be kept running without regard for the basic objectives for which they were established, we become slaves of institutionalism. Such appears to be the profile of many Christian institutions, both traditional and those which are so-called, "experimental". **The basic criterion to judge the validity of an institution is to ask if it is meeting the needs of the society.** A medical college or a big hospital has full justification to continue if it serves the less privileged sections of society. But, if it trains young doctors to add to the army of expatriates looking for greener pastures in rich nations, or if the services provided by the hospitals are so expensive as to exclude the poor, then it loses the justification for its existence. The same kind of criteria should be applied to the so-called experimental projects or their evaluation: **Do they meet the needs of the community? Do they promote self-reliant development?**

II. There are four constituent elements of self-reliant development:

1) to start from the realities of a given situation;
2) to determine priorities in terms of the needs and resources of that society;
3) to embark on sustained efforts to mobilize available and potential resources within that society or nation;
4) to consider foreign economic links in terms of whether they really serve national priorities.

Realities of a situation

Our societies (developing countries) are called "poor". That description is not quite correct. Not everyone in that society is poor. There are some very rich people in these countries. In fact, economic and political power is concentrated in their hands. However, it is true that poverty, and the factors that cause it, represent the basic reality of our societies. If that society is to progress, it must learn to acquire self-confidence within such conditions of poverty. That is a fundamental condition for self-reliance. Developing countries will be doomed to psychological subservience and feelings of inferiority if they apply imitative norms of rich nations to judge what contributes to national and self-respect. That seems to be the tragedy of many countries of the Third

World thus far. Having more things, having "modern technology", pursuing the path of consumerism and patterns of production and investment related to it, judging progress largely by a material yardstick of per capita consumption of steel, energy, etc., are examples of imitative norms. To appear to be like rich countries seems to be the main objective. That is why we have often misunderstood development to mean being similar to some industrial country, another Japan, another Federal Republic of Germany, another USA, and so on. Under that kind of an approach, we are doomed to "second-class status" for the foreseeable future.

According to many projections, the gap between developed and developing countries will continue to widen. Over the last two decades, this has been happening. In other words, instead of coming nearer to rich nations, the poor nations (or at least the majority of them) have fallen further behind. If our dignity and self-respect depend upon becoming like rich nations, it is obvious that we will never acquire such a sense of equality, of being someone AS WE ARE. Are we then condemning ourselves to becoming "NON-PEOPLE" by imposing upon ourselves the norms and values of affluent societies of the West? Much of economic planning appears to have done exactly that. We need, therefore, to struggle for a kind of intellectual liberation, to accept the historical situation in which we are, and to discover our potentialities in that limiting situation, without any feelings of inadequacy with respect to rich nations. That kind of realism is an essential condition of self-reliance.

Sometimes, the term, "identity" is used to describe this search for self-respect and dignity within the realities of our situation. It is often used by churches in countries of the Third World. It is really a search for recognizing our potentialities and building on them, rather than continuing to depend upon the so-called "parent" churches in the West. The call to moratorium, given by the All Africa Conference of Churches at Lusaka in 1974, symbolizes this quest.

Priorities, needs, resources

How do we determine our needs? What do we consider to be our resources, and how are these to be utilized? These are important questions in the process of determining priorities. Needs are not to be judged in terms of the style of living and expectations of materially affluent societies. This has been the practice in a number of developing countries, and has resulted in an imitation of consumerism, or prestige production (big projects, big industries, advanced technology, five-star hotels, Jumbo jets, and so on).

In countries infected by consumerism, the economy is geared to the satisfaction of luxury needs, while the majority of the people struggle to survive under conditions which we would normally classify as submarginal. It means that we ignored our realities when we determined our needs. Obviously then, our strategy for development tends to have an imitative concept of our needs and to seek resources to fulfil them. That means ignoring our own resources, such as manpower, simple skills, etc., which could more adequately help to meet the basic needs of a poor society. Such distortions have become a part of the experience of development over the last two and a half decades. It would then be fair to conclude that much of the development process in the Third World has not been in line with self-reliance.

Mobilization of actual and potential resources

If we determine priorities in terms of our needs and resources, then we must make efforts to mobilize the resources that are available, and also try to develop potential resources. There are many simple skills available in any developing country. Instead of building production on the basis of such skills through cottage and small-scale industries, there is a tendency to copy developed nations and to go in for advanced technology and large-scale production. Where cottage industries are promoted, they are linked to foreign demand, such as tourism, or temporary "fancies" (whims) of buyers in rich nations for this or that handifcraft product from poor countries. This is a gross misdirection of productive skills of a developing country. These skills should first and foremost be used to provide essentials for the masses of the people. Instead of that, they are harnessed to the foreign trade sector for the benefit of the already prosperous. An example from Indian conditions would illustrate this tendency. Originally, the production of "khadi" or hand-spun cloth was propagated by Mahatma Gandhi to utilize the free time and simple skills of the people (available resources) and to meet the basic need for clothing. It was an essential part of self-reliant development that would break the exploitation of foreign cloth and the village money-lender from whom the poor often had to borrow to buy necessary clothing. Today, in free India, khadi has been commercialized, its fundamental purpose forgotten. At the moment, it has a good market in some Western countries and with the high income groups in India. It has failed to relieve the scarcity of clothing which the deprived sections suffer from, and failed to make use of people's skills in meeting that basic need. One can only describe it as a misuse of resources that increases dependence and exploitation.

Relations with other countries

Self-reliant development does not exclude cooperation with external groups or other nations. But that cooperation has to be in terms of national priorities established on the afore-mentioned principles. Mobilization of internal resources to meet basic needs is the first step. If international cooperation strengthens that process, it would have a place, otherwise it would be subversive of self-reliance. Quite often, foreign aid has been looked upon as an easy way out, a shortcut to development, as if a society could deal

with the problem of poverty without sweat and toil and social dislocation. This may be more true of programmes carried on by voluntary organizations than by governments, though, in general, the observation would apply to both types of activity.

III. Priorities and strategies of development have been unduly governed by focusing on the limitations which a developing country has. Even the definition of underdevelopment in traditional economics is given in terms of certain inadequacies, such as scarcity of capital, low man/land ratio, (due to large population), insufficient managerial and administrative skills, lack of efficiency, a structure of foreign trade that has proved burdensome, and so on. Naturally, the solution was sought in getting resources to overcome these deficiencies. Aid from industrial countries, technical skills and expertise, foreign investment, experience in agriculture and industry, etc., were brought in to fill the gap. To deal with problems of health, it was felt that more hospitals on the lines of "modern hospitals", more doctors, more medical colleges, in fact, more of what the prosperous societies have, would provide a solution. These efforts have undoubtedly conferred some benefits. But the experience of many developing countries shows that our imitative ways and eagerness to secure help from others, without first building up our own potentialities, has become help that leads to a new kind of helplessness.

The emphasis was on economic growth, a quantitative increase in what we lack. This has resulted in expansion of a questionable kind. For instance, more medical colleges have given more doctors, but we have not asked the important questions: What kind of medical education should be given in our conditions? What should be the motivation of those who are trained? Can some of the traditional skills and systems be utilized? — and so on. In the obsession with quantitative increase, the fundamental question has been pushed to the background, namely, Does this increase deal with problems of poverty and injustice?

Realism requires that a society should be aware of its shortcomings. But realism demands a further step. That society should also be aware of its assets, its potentiality. In order to overcome shortcomings, such as hunger, malnutrition, illiteracy, disease, low production, etc., it is necessary to activate whatever points of strength there may be. Unfortunately, this has not been fully recognized in much of development economics. **What are the most important assets of a poor country? — its manpower, the people and their skills.** But we have often thought of the people only as a burden, as the pressure of population on limited resources. It is true that people represent the burden of needs and consumption. However, the same people are also producers, innovators, and custodians of many potentialities still to be developed. Economic planning should, from the outset, use their abilities, strengthen their potentialities, and teach a sense of social responsibility, so that they would be willing to apply their efforts in the interest of the total community. When India began economic planning in 1951, the number of unemployed were about 3.3 million. In 1974, after two decades of planning, that list had risen to nearly 12 million. Obviously, we have not made the right use of our assets. There has been impressive industrial and agricultural progress in India. In the area of social service, such as education, health, improving the condition of outcasts, etc., there has been a remarkable increase. But the fact that unemployment and underemployment have also risen, points to some basic contradictions in our method of planning and our priorities. That has now been recognized, and the shift since 1971 to "BANISH POVERTY" (a slogan with which the Congress Party swept the elections) symbolizes the mood. But the mood must become a movement, and be made a reality in economic policies that deal with unemployment. Simultaneously, there has to be an increase in the production of essential goods and services, so that, after getting employment, people will be able to buy the basic necessities of life. Instead of production for profit in response to the demand of high income groups, it is necessary to have production of socially necessary things. That has many implications. It requires a stoppage of luxury and non-essential production, of curbs on the consumption of high income groups which encourage that kind of production, of regulation on the direction of investment so that it flows into the essential sector, and so on. If a society is not giving priority to mobilization and use of what it has, there is no justification to seek resources from outside. It would only increase dependence and weaken self-reliance.

This applies as much to church-related programmes as to national effort. For instance, we must ask if the church in India has tried to mobilize internally available assets, not only within the community which is called "Christian", but in the larger community which the church claims to serve. If not, then infusion of resources from outside can only weaken our will and increase the sense of dependency.

IV. In order to mobilize assets, it is essential to develop the will of the community. In practical terms, this may be possible only if the deprived groups, not the privileged, see that the benefits of their efforts are coming to them immediately in the form of goods and services that assure a desirable minimum for life. Economists and planners tend to promise growth and a higher standard of living in the long run. Indian planning projected a doubling of per capita income in 25 years. Figures for per capita income can be deceptive averages. The "poor" do not necessarily benefit from the increase which tends to be monopolized by privileged sections.

People who are hungry and victims of injustice today

should not be expected to wait patiently for 25 years before their condition improves. After more than two decades of planning in India, 40% of the people are living below the poverty line. That is the official estimate. Unofficial estimates have put the percentage as high as 60%. How can we keep saying to this submerged majority that it must wait for another two decades before its condition can improve?

One of the important ways to develop national will for development efforts is that the poor secure immediate benefits from improvement in the economic condition. This would be possible if policies of social justice are followed in a society. In an important way, social justice is integral to self-reliance. When people receive a fair share of social production, they are motivated to contribute to social effort. Instead of the "rich becoming richer and the poor poorer", as has happened in many developing countries, there has to be a reduction of inequalities, a better sharing of economic, social and political power between the privileged few and the majority.

However, in order to assure a desirable minimum for the many, it becomes necessary to impose a maximum on the consumption of the few privileged groups. There are not enough resources in a developing country to provide all that the rich want and all that the poor need. Since self-reliant development requires the full effort of the majority, restrictions have to be placed on those who "have". This is part of social justice.

V. The intention of these comments is to show that self-reliant development concentrates on people. It questions and rejects the conventional description of countries as "poor". When we talk about poor countries, we get caught in the trap of national and per capita incomes, rates of growth and quantities. All these are important, but only in relation to what is happening to people.

When we talk about people and their poverty, we have to ask the fundamental question, Why are these people poor? Most of them are quite hard-working; often more than some of us who are more prosperous. Then why are they poor? An important part of the answer is that certain relationships in society are responsible for their continuing poverty. These are relationships of property, of ownership, of power in various forms. Many of the developing countries have a social system in which some are at the top and some have been the traditional underdogs. To overcome poverty and injustice, (which are inherent in such relationships), we have to change the social system. No amount of resources will bring about change. On the contrary, since these will fall into the control of those who have power, they will only increase the hold and dominance of such groups. This is evident from the trends in many developing countries. That is why the new understanding of development emphasizes structural change, the need to change existing power and property relationships. Resources are important. But unless a new pattern of social relationships is established, they will keep the poor in conditions of misery.

A country is not poor. Certain groups of people in that country are poor. Unfortunately, they are the majority in developing countries. The focus of development, since it is on poverty, has to be on these people and their basic needs. This is true in specialized services like medicine and health as well. An expensive and sophisticated medical system, imitative of industrial countries, serves only the higher income groups in developing countries, plus a small section of the poor. The larger section of the poor are excluded. Hence, in deciding the nature of health care in developing countries, this aspect of the question should be kept in mind. Primary or community health care focuses on the people, not only on their health needs, but also on the ability they have and must discover to do something about it.

Health care should be fitted into a framework of self-reliant development. Judged in the light of this, much of the health programme in developing countries is misdirected. The emphasis on primary or community health care is more in line with the demands of self-reliance.

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IN DEFENCE OF AFRICAN FOODS AND FOOD PRACTICES

James McDowell

(James McDowell is Chief of the Food Technology & Nutrition Section, UNICEF Eastern Africa Regional Office, Nairobi, Kenya.)

The overall quality of the foods which make up the African diet, together with some aspects of traditional food usage and, particularly, the "ignorance" of African mothers, have frequently been indicted (blamed)* as causative factors in the malnourishment of young children.

The magnitude of the malnutrition problem is very serious, and it has, unfortunately, shown no change for the better despite many remedial efforts over the past 25 years. Results of a multitude of nutritional surveys indicate that incidence of malnourishment in children under 5 years of age is, on average, about 30%. However, this figure, although distressingly high, has its positive corollary (aspect) as it infers that some 70% of children are not malnourished in relation to accepted standards.

Since these children are living in the same ecological economic, social, and cultural milieu as those who are malnourished, since they do not have access to any special foods, and since their mothers are as illiterate and as nutritionally ignorant as the mothers of the malnourished children (Sharman 1972), pragmatism (practicality) would suggest that food quality and food practice which is adequate for 70% of children should also be adequate for the other 30% and that we must seek for the major causes of malnourishment among other factors.

If this conclusion be accepted, then it would seem that rather than attempting to introduce new foods or change basic food patterns it would be more profitable to concentrate on increasing the quantity and promoting effective use of the indigenous (local) foods which seem to serve the majority very well. Such a decision would allow a considerable volume of existing effort which is not producing desired results to be diverted along more profitable lines.

Factors Unrelated to Food Quality

Apart from the intrinsic (inherent) quality of the basic food supply, there are, of course, many other factors implicated in malnourishment. Some of these are:

(i) The birth weight of the child as influenced by the nutritional history and age of the mother at conception.

(ii) The exclusion for various reasons of otherwise available foods from the child's diet.

(iii) Unavailability of certain foods due to seasonal scarcity or periodic domestic economic stringency (hardship).

(iv) Anorexia (reduced appetite) during frequent episodes of illness which can seriously limit food intake, even if a normally adequate diet is available. This factor could be particularly important where the normal diet has a high bulk/nutrient ratio.

(v) Acute or chronic illnesses which may reduce the child's ability to assimilate ingested food (absorb food eaten) and which may be accompanied by anorexia and also an increase in nutrient requirements.

When such factors are taken into account, and when the extent to which many children are exposed to illness is fully realized, it becomes clear that observation of malnourishment does not point automatically to defects in the quality of the available diet.

Validity of Criticisms of Food Quality

Much criticism of the African food supply has been based on content and quality of protein in relation to estimates of dietary requirements. The fact that estimates of requirements have been revised downwards over the years questions some of the original criticism on this basis.

In addition, many criticisms have been made when prevailing attitudes placed a heavy emphasis on dietary protein. This emphasis has been questioned elsewhere, (McLaren 1974, Payne 1974), but there is obviously a need for a holistic viewpoint which takes into account the important role of energy deficiency and resultant protein catabolism (breakdown) as a causative factor in protein deficiency states. Many

* Communication is only effective when the written word is easily understood by its readers. The CMC is aware that it has failed at times those whose mother tongue is not English by the use of unnecessarily complicated language. In an effort to assist clear understanding, we have chosen to offer simplified words in brackets after what we believe to be rather difficult words.

Table I, Essential amino acid, niacin, and calorie contents of egg, groundnut, sesame, and some legumes

Milligrammes per 100 grammes of food

	Egg	*Groundnut*	*Sesame*	*Bean*	*Cowpea*
Calories/100 g	158	579	592	339	340
Isoleucine	778	990	773	927	895
Leucine	1091	1376	1433	1685	1647
Lysine	863	1036	585	1593	1599
Total S. Acids	717	704	988	422	528
Total Aromatic	1224	2603	1614	1713	1820
Threonine	634	764	763	878	842
Tryptophan	184	305	287	223	254
Valine	174	1224	985	1016	1060
Arginine	754	3269	2586	1257	1498
Histidine	301	694	523	627	764
Niacin	0.1	17.0	5.0	2.0	2.0

Amino acid figures from *Amino Acid Content of Foods* (FAO 1970). Other compositional data from *Tables of Representative Values of Foods commonly used in Tropical Countries* (Platt 1962).

foods have been criticized on the basis that they contain "only calories", (the "see only what is not there" attitude), and their dietary value may, thus, have been impugned (questioned). It is perhaps, salutary to consider that occasions could arise where the ingestion (intake) of the extra calories which could be provided by, say, a few ounces of cassava, might well make all the difference in a child's diet, and might thus prevent a condition of protein deficiency.

The quality of the mainly vegetable protein in the African diet has also been criticized on the basis that vegetable proteins are less concentrated sources of certain essential amino acids than animal protein. Such criticism does not always take into account the fact that the only important criterion of the protein quality of a food is the amount and proportion of essential amino acids released in the digestive tract. For example, groundnut **protein** has been criticized because **per unit weight of protein** it provides lesser quantities of essential amino acid than egg **protein.** However, groundnuts have **twice as much protein** as eggs, and if we examine groundnuts and eggs on the basis of the amount of essential amino acids contributed per unit weight of the **food** (Table 1), we find that, for all practical purposes, it does not matter whether one eats 100 grammes of eggs or 100 grammes of groundnuts — the contribution of essential amino acids is the same.

It also has to be borne in mind that comparison of one isolated protein with another cannot take into account the amino acid complementation which takes place in a mixed diet, **e.g** the complementation of low-lysine cereals with high-lysine legumes.

It can be concluded that criticisms based on comparison of one isolated protein with another, out of context of the situation in which the foods containing these proteins are consumed, can be misleading, and that there is good reason to challenge the basis upon which the "inferior" or "second quality" label has been rather arbitrarily applied to many valuable African foods.

The Nutritional Advantages of Some African Foods

Most investigation of African foods has tended to focus on their nutritional disadvantages, so it may provide an interesting and welcome change to stress their nutritional merits.

Cassava

This food probably heads the nutritional "rogues' gallery" (list of targets for criticism). It is true that it has low protein content, is bulky (although not so bulky as many porridges), and provides mainly calories.

If we look at the positive side, we find that cassava is the most prolific (rapid growing) of all calorie producers. Growing on poor soils with minimal production inputs, and presenting no post-harvest storage problems, cassava can provide 7,500,000 calories per acre. Calories are just as necessary for nutrition as protein, and we cannot afford to ignore any good calorie source. Dried cassava and, in particular, dried cassava flour has 355 calories per 100 g (just 45 less than pure sugar) and has about 2% of crude protein.

If we mix 70 g of cassava flour with 30 g of groundnut flour, we obtain a mixture equivalent in protein content and better in lipid calorie content than most cereal flours, with some 9.5% protein and 400 calories per 100 g. This could be used as a valuable component in a child's diet. This mixture will have about 6 mg niacin per 100 g and in this respect as well as in calorie content, and NDP cals% , will be superior to maize flour which is a common component of children's diets.

This represents only one possible use for the prolific cassava which, whether nutritionists like it or not, will continue to be grown and used. Pragmatism demands that we accept this fact, and devote our energies to ensuring its **effective** use.

Groundnuts

The groundnut must rank high on the list of Africa's "super foods". It has up to 27% protein and 580 calories per 100 g (Platt 1962). Weight for weight, groundnuts are a better growth-promoting food than eggs and, in some cases, are a much better food supplement than eggs. Table I shows the essential amino acid and niacin content of 100 g of groundnuts as compared with 100 g of eggs. The difference in sulphur-containing amino acid contents is insignificant, and groundnut has advantages in supplying all the other essential amino acids. Lysine content, for example, is significantly higher.

A common practice in nutrition education is the teaching of poverty-stricken mothers how to fortify maize porridge by adding a scarce and expensive egg. The use of 50 g of groundnut flour rather than a 50 g egg would be much better. The groundnut will add 13.5 g of protein of equivalent amino acid content to the 6.5 g provided by the egg. The groundnut will provide more tryptophan than egg, and will supply some 8 mg of the anti-pellagra vitamin niacin, which is so essential in maize diets and which the egg cannot supply. In addition, 50 g of groundnut will provide 200 calories more than a 50 g egg. Groundnuts are easier to produce and are much less expensive than eggs, and the overall advantage of using groundnut instead of egg as a supplement to maize porridge is so overwhelming that its general neglect by nutrition educators is, to say the least, incomprehensible.

The groundnut is one of the most valuable foods we have and, as Latham (1973) points out... "The simple expedient (act) of adding a handful of groundnuts per day to the diet of everyone over six months of age in Africa would solve a large proportion of the nutritional deficiency conditions which exist."

Groundnuts are the only calorie and protein source which requires no cooking – a tremendous advantage for child feeding. Groundnuts can also be used to produce a nutritious milk by the simple process of macerating (softening) them with water (Brock and Autret 1952). We hear a lot of promotion of soya milk but very little of groundnut milk which is just as nutritious and which is so much easier to produce.

Groundnuts have, of course, fallen victim to unjustified criticism to the effect that they are somehow unique in that they are liable to be contaminated with a substance known as aflatoxin. This incorrect belief has persisted despite a clear and unequivocal statement by the Protein Advisory Group (1969) which points out that "The hazard involves many food crops which are harvested, processed and stored at high moisture levels." Coady (1965), as a result of extensive studies on fungal contamination of African food grains including wheat, millets, maize, sorghum, and teff, also points to the ubiquitous (widespread) nature of fungal contamination and remarks, "It must not be thought that the problem of fungal hepatotoxins concerns only aflatoxin in groundnuts."

Incidentally, it requires only 0.07 of an acre (0.03 hectares) to produce enough groundnuts (18.25 kilos) to provide a child with 50 g of groundnut every day for one year.

The Millets

Finger millet **(Elcusine corocana)** and Bulrush millet **(Pennisetum typhoideum)** are among the most valuable cereals, surpassing maize and rice in the quality of their protein content, their ability to thrive in marginal areas, and in their drought-resistant capabilities. The replacement of these African foods with drought-sensitive and usually less nutritious maize (mainly under commercial pressures) is to be deplored (much regretted).

Sesame (beniseed, sim-sim)

This valuable oilseed has 50% of oil, 18% of protein, and a high calcium content. Sesame can provide 590 calories per 100 g and more sulphur amino acids (998 mg per 100 g) than any other source (FAO 1970). Its usefulness and ready acceptability need to be exploited much more than is being done at the moment.

The Legumes (vegetables)

Africa has an extensive range of legumes: the beans of various kinds, cowpeas, pigeon peas, chick peas, grams, field peas, bambara nuts and, of course, groundnuts, with between 20 and 27% of high-lysine protein. These make the ideal complement to cereals and low-protein high-calorie foods. All have their own particular place in the African food pattern and are readily acceptable. One might thus query (question) the necessity of attempts to introduce the soya bean with its lack of compatibility with existing cooking methods and its doubtful acceptability. Perhaps if an equal amount of money, time, and effort had been spent on promoting local use of groundnuts, Africa would have a much better food supply today.

The dependence of African agriculture upon external sources of nitrogenous fertilizer – a dependence created by attempts to "westernize" African agriculture – promises to create severe problems in the context of increases in costs of petroleum from which such fertilizers are manufactured. Legumes, which have been displaced to a great extent by "modernization" and the fertilizer-dependent "Green Revolution", need no nitrogenous fertilizers. Whereas every ton of protein produced by hybrid maize requires the import of a ton of ammonium sulphate, legumes make their protein from atmospheric nitrogen, and place no drain whatsoever on foreign exchange. Legume protein is "homemade" whereas maize protein is largely imported and places a drain on foreign reserves.

Traditional Food Practices

Morley (1974) quotes an Asian sociologist as saying about many expatriate advisers, "... they see only what is not there", and points out that, "even after a longer stay in a country other than one's own, one may limit one's observation to the obvious differences between that country and one's homeland."

Such comment may be apposite (appropriate) in relation to some attempts to relate malnourishment to observations of traditional food practices. In preoccupation with culturally foreign concepts of child care, and with what was "not there", some observers may have failed to pay sufficient attention to the valuable aspects of traditional practice which "were there".

Taboos

Restrictions on the consumption by women and children of some foods, e.g. eggs, fish, and meats, which are highly regarded in Western cultures, provided an immediate example of something which was "not there", and such taboos came in for considerable criticism.

However, if one looks at the taboos on these foods, (many of which can be vectors of food poisoning, which can be very hazardous for pregnant and nursing mothers and children), one finds a basis of wisdom, practicality, and environmental awareness which is not always evident in "developed" cultures (Heisler 1970).

The African hen produces very few eggs and, if these are allowed to be eaten indiscriminately by foraging children, (children in rural Africa find a lot of food by foraging (searching)), then the domestic hen could become as extinct as the Dodo.

Also, it is clear from calculations of per capita food availability that the taboo foods, in any case, represent such a minor proportion of the diet that the overnight abolition of such taboos would not make any significant difference to the protein intake of the restricted groups. The per capita production of egg protein in one typical country is, for example, 0.2 to 0.4 g per day (McDowell 1972; Amann 1972) so, even if a system could be implemented whereby all available eggs were given only to children, the improvement in dietary quality would be insignificant.

Another practice which has received much criticism is that whereby the head of and senior members of the household receive preferential treatment in allocation of foods. This practice is not unique to Africa, and is common to peasant and artisan societies all over the world. It is essentially a protective mechanism. What will happen to the family unit if its supportive and protective members fall ill or die? Is it not true that there is often a high incidence of malnourishment in homes where the family unit is broken, where mothers are unmarried or unsupported, or where the father is absent or dead?

So far as taboos and apparently inimical (unfavourable) food practices are concerned, there is, of course, wide variation between different African cultures, and it is impossible to generalize. Some mothers in Uganda, for instance, will not feed beans to young children because of observed digestive upsets related to the indigestible skins, whereas mothers in southern Tanzania soak the beans and remove the skins before giving beans to children. In this type of situation, there is need for attempts towards cross-cultural transfer of knowledge.

By no means all traditional practices can be regarded as advantageous or benign (harmless). There are some, such as the use of infusions of hepatotoxic herbs as "bush teas", which can be deleterious (harmful) to child health, although whether these practices can be regarded as being related to malnourishment per se (as such) is, of course, questionable.

Traditional attitudes and beliefs regarding illnesses and disease are also frequently responsible for failure to seek effective remedial treatment for acute malnourishment. Many malnourished children are brought to health centres or hospitals only as a last resort when traditional methods have failed, and, by that time, the children are often at the point of death. It can also be conjectured (presumed) that many children will die of acute malnourishment due to failure of traditional curative approaches.

Incorrect traditional attitudes and beliefs regarding the means of curing acutely malnourished children do, therefore, present a serious health hazard. However, the régime (action) required for cure is necessarily very different in qualitative and quantitative terms from régimes necessary for prevention. Giving a malnourished child good food will, generally, result in cure so long as any complicating medical conditions are dealt with, but prevention is not necessarily just a matter of more food, since multifactorial (many different) aspects are involved. Thus, incorrect traditional attitudes to treatment of acute malnutrition may result in failure to achieve a cure in a high proportion of cases, but will not, necessarily, be involved in failure to prevent the condition in the first place.

However, in spite of the criticisms which have been made, we are still brought back to the pragmatic (practical) observation that, in most cultures, the nourished children who constitute the majority are just as subject to prevailing cultural food practices as the malnourished, so it is perhaps more logical to indict deviations or departures from traditional practices rather than the practices themselves as potential factors in malnourishment.

Traditional Practice and "Development"

One important departure from traditional practice is the decline in breast feeding and restriction of the duration of lactation — a departure, which it must be noted, is due largely to attitudes and influences imported from the developed world.

In traditional practice, breast feeding is universal and is continued for up to 2 1/2 years. In addition, many societies imposed a restriction on sexual intercourse during the lactation period, thus providing the ideal method of child spacing, protecting the health of both mother and child, and stabilizing population increase. However, with the advent of "civilization", its restriction of polygamy, and its economic pressures and newly awakened (but not necessarily beneficial) aspirations towards "modernity" and "progress", the effect on breast feeding practices, and on maternal and child health in those areas where these influences have penetrated, has been disastrous (Muller 1974). In addition, those who are rightly concerned with the population explosion are desperately trying through largely unacceptable "Western" methods to tackle a problem which Western interference with traditional practice has, itself, largely created.

No cultural system can claim a monopoly of wisdom or a high degree of perfection, and it is possible on cursory (superficial/brief) investigation, particularly when the observer is from an entirely different cultural background, to make criticisms of any society. Pragmatic observation of the **results** of African traditional food practice, in terms of the millions of children who are not malnourished, would suggest that apparent defects may have been overemphasized, and that many beneficial aspects may not always have been clearly understood. It is, therefore, suggested that identification and promotion of the many good aspects of traditional food use, which already serve many children well, may provide

a more positive, more culturally acceptable, and more effective means, of promoting better nutrition in Africa than attempts to introduce exotic foods, to change food habits, and food patterns, or to provide didactic (educational) instruction in the principles of nutrition to illiterate African mothers.

THE WAY AHEAD

Meeting Food Needs

Acceptance of the hypothesis (assumption) that the overall quality of African foods is adequate points to the conclusion that the greatest priority, so far as the food factor in malnourishment is concerned, must be to make available **more of the same kinds of foods.** This does not necessarily indicate a need to **produce** more food. Food **production** in Africa is already well in excess of requirements for many years to come, but food **availability** is below current needs. The explanation of this paradox is to be found in the fact that, currently, some 25 to 30% of all food produced in Africa is wasted due to post-harvest spoilage. This means, not only a waste of badly needed foods, it also represents a waste of all the good land, inputs and labour used to produce the food which is wasted.

Before we talk of expensive schemes for irrigation or for bringing more land under cultivation, or for importing prohibitively expensive fertilizers and other inputs to increase production, we must tackle the massive problem of food losses. The major element of food loss occurs on the small farms where most of Africa's food is produced. Simple, low-cost, and entirely appropriate methods for vastly improving food conservation at this level are available and **must** be applied. The key to Africa's future needs lies not in high-lysine maize, triticale, or bumper (extra large) crops of soya beans, but in effective conservation of the foods already produced, and in development of the ecologically adapted and already highly productive traditional methods of food production. Recent research on traditional food production methods indicates that the "ignorant" African farmer knows what he is doing and that, in the African environment, his methods may be more effective in producing food cheaply than has been realized by the proponents (those who support the idea) of Westernization of African agriculture (Allen 1974).

Meeting Health Needs

Satisfying food requirements alone cannot solve the problem of malnutrition. Children must be healthy enough to benefit from food, and there must be a major emphasis on elimination of those conditions which predispose (lead) towards and exacerbate (worsen) malnourishment.

Traditional approaches to health care, valuable as some may be, cannot prevent a child from getting measles, whooping cough, TB, tetanus, polio, hookworm, schistosomiasis, malaria, or a debilitating (weakening) bout of diarrhoea. They cannot always deal with problems of environmental sanitation or polluted water supplies. It is in this field that concentrated education and action is desperately needed, and it would probably be more effective for an extension worker to spend half an hour convincing mothers of the need to have their children immunized, than teaching the "three food groups" or "how to add an egg to the porridge".

There is a great need for a pragmatic readjustment of our priorities in attempts to control malnourishment at grass roots level, and it is hoped that the views expressed in this consideration may help in this direction. The task requires a compassionate understanding of the situation, and a humility and freedom from preconceptions (prejudices), which is probably best summarized in the following lines, attributed to Kwame N'krumah:

"Go in search of your people;
Love them;
Learn from them;
Plan with them;
Serve them;
Begin with what they know;
Build on what they have."*

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* Many readers may well note the striking similarity between this poem and that used on the cover of CONTACT 25, which was said to be an old Chinese poem.

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* * *

CMC NEWS

Ecumenical Medical Conference on "Christian Participation in Medical Work in Zaïre", held at Kinshasa 18-26 October 1975.

The conference was organized by the Bureau des Oeuvres Médicales of the (Catholic) Episcopal Conference of Zaïre, and was very pleased to welcome the Minister of Public Health.

Eighty participants from all parts of Zaïre met together. There were representatives of Catholic, Protestant and Kimbanguist medical work, government representatives, representatives of FOMECO (Fonds Médical Communautaire) and FOMETRO (Fonds Médical Tropical) and WHO.

The meeting studied an inventory of medical services organized by the various sectors, and a study was made of practical ways to integrate church-related work into the national health services. The various church leaders recognized the new national health policy as set out in a document drawn up by a working group.

There were five major themes at this meeting:

1) Christian participation in medical work in Zaïre;

2) The health centre;
   - organization of rural health zones
   - promotion of auxiliary personnel
   - environmental hygiene
   - the family health centre in urban districts
   - establishing and running the health centres

3) The centre for community wellbeing (CEBEC);
   - the work of the nurse-in-charge and community health care
   - development and comprehensive medicine committee
   - families – village health promoters
   - project to construct a health centre
   - training MCH promoters
   - rationalization of health care methods through models of detection and treatment of TB
   - integrated base for MCH

4) The hospital;
   - restructure hospital work with a view to division of responsibilities
   - organization of the hospital in consultation with the Administrative Council
   - the tasks of the person who administers a rural health district
   - making the hospital structure more human
   - sharing of responsibilities between health personnel at the hospital

5) Family Planning;

Each point listed under theme headings was presented by a speaker, and followed by a period of discussion.

Having examined these different themes, the following conclusions were drawn:

1. The health service makes use of medical techniques with the aim of serving the community, so it must be organized with this objective in mind.

2. In order to make the best use of human and material resources available in the country, integration of all medical facilities is essential.

3. The meeting expressed satisfaction at the assurance given by the Ministry of Health that the legal, administrative and financial autonomy of the different health networks would be respected. In turn, these networks expressed the wish to collaborate actively in the new national health policy.

4. The health service must be organized in harmony with the socio-economic development of each region. The desire to respect this necessity must lead to searching for means of self-support at the level of each health care unit.

5. It is important to organize a health service based on the felt needs of the population and to maintain a permanent dialogue between health teams and the population.

6. The health unit, which in the new health plan is called CEBEC, is the privileged place where the health service and the population can meet. Such a unit must therefore:
   - ensure continuous integrated preventive and curative care
   - encourage the formation of a health committee to represent the population served
   - encourage implementation of the decisions taken by this committee
   - cooperate with other development sectors.

7. It is at this primary health care unit that all cases will be dealt with. Only those which for technical or economic reasons cannot be treated at this unit will be referred to hospital.

8. Bearing this in mind, the hospital should be organized as a technical referral centre.

9. Various constraints may justify organizing an intermediary referral unit between the primary care unit and the hospital. The term "health centre" cannot be used to designate this intermediary unit. The term "health centre" is only applicable in the case of primary units. The meeting proposed to call these primary units "community health centres" replacing the term "CEBEC".

10. The health service must be organized with a view to making the best use of its personnel. This implies:
    - standardization of tasks so that they can be delegated to auxiliary staff. This delegation applies to administrative as well as medical tasks.
    - supervision undertaken as permanent training
    - each unit must evaluate the effectiveness of its work.

11. Management of a medical unit means management of medical and administrative structures.
    a) The medical structure should rationalize the treatment of ambulatory patients and those who are hospitalized. This means clear definition of objectives (e.g. rationalization of the use of laboratory tests within the framework of a plan for diagnosis and treatment).
    b) On the administrative side, a budget has to be determined according to the objectives fixed and the resources available. In church health networks, the budget reserved for medical work should be separated from that destined for other activities, and it should be managed by an **organized** administrative service.

12. Health education was brought into question and it was noted that:
    a) it must be based on the felt needs of the population, these needs being determined through the dialogue between the community health committees and the staff of the primary health units.
    b) it must be based on priority objectives defined in the programme of public health. Reflection on these objectives will allow the essentials of the "message" to be deduced.
    c) these general principles which apply to health education also apply to family planning education.

13. In order to keep the various medical groups in touch with each other, it was decided to begin publication of a liaison bulletin. Furthermore, a central supply service is proposed.

Comments: The general plans for organizing community health in Zaïre (in line with the government working document) are as follows:

A. A rural health district should coincide as far as possible with the administrative district.

B. A general hospital must be designated in each rural health district. If 2 or 3 are already there, so much the better.

C. Around the general hospital, maternity-dispensaries or major dispensaries (CEBECs) should be constructed. If some already exist, so much the better. A health centre must be very close to the population so that it can prevent people from becoming ill. Prevention is the primary objective of the health centre.

D. Approximately 10 villages will be served by a health centre where:
    - preventive care will form the greater part of the activities;
    - curative care will be limited to first aid.

E. At the village level, there will be both health promoters and MCH promoters, plus agricultural extensionists. The preventive work will be the responsibility of the promoters and the community. Under the umbrella of 'prevention is better than cure' is another important idea: 'prevention is harder than cure'. This is why, up until now, curing has had the upper hand over preventing. We like to do what is easy. It is not easy to train our children to be clean so that illness can be prevented.

From the Administrative Point of View:

The District Medical Officer will be working with the church community and the district doctor/administrator. National and church-related health services will both provide manpower. However, those groups which can contribute more will do so. The material needs of the District Medical Office are the responsibility of the state and church communities. Those which have more to offer will, of course, provide more. Because the state already assists church-related services with subsidies for certain health units – medical training and medicines – the administrative expenses for the District Medical Office will be borne by both state and church. A means of dividing these costs must be found.

Salaries for staff at the District Medical Office: The state will pay for those whom it employs, and the church for those people whom it employs and uses in the service of the state.

If health services can be organized on these lines, we can then talk of an integrated and coordinated health

service in the Republic of Zaïre which will make our Minister of Health very proud.

The District Medical Office is a shared institution (state and church). The creation of this institution will show that in Zaïre, the state, churches and private enterprises are all integrated in community health work.

(Unofficial translation of a document prepared by Citoyen Mandiangu Mbongi Kiletu, Director-General of the Institut Médical Evangélique, Kimpese.)

* * *

Dr Sylvia Talbot and Mr James C. McGilvray of the Christian Medical Commission participated in a health care planning conference organized by the Kenya Catholic Secretariat and held in Limuru, 21-25 November 1975. A hundred and fifty representatives from Catholic health programmes were joined by representatives of the Ministry of Health, and the Department of Community Health of the University of Nairobi. Two of the Catholic Bishops fully participated in the conference and His Eminence, Maurice Cardinal Otunga was present on two occasions. The present status of Catholic health programmes was critically reviewed and proposals made for the most relevant priorities to be adopted in the future. The conference proposed negotiation with the Ministry of Health to seek approval for the training and recognition of frontline health workers for the promotion of primary health care. Although invited to participate in the conference, the members of the Protestant Churches' Medical Association were unable to do so, which was unfortunate.

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CMC NOTES

Sources of Teaching Material for Nutrition Education:

National Food and Nutrition
Commission,
PO Box 2669,
Lusaka,
Zambia.

(Exceptionally good posters and other teaching material)

ENI Communication Centre,
PO Box 2361,
Addis Ababa,
Ethiopia.

(Child care and nutrition education packages, kits of programmed visual aids for use in the field, and textbooks for use by the target groups, ranging from illiterate villagers to high-level students)

Teaching Aids at Low Cost,
Institute of Child Health,
30 Guilford Street,
London, WC1N 1EH,
England.

(An excellent source of materials for those working in the field of nutrition and child health)

CERES, published by The Food and Agriculture Organization of the United Nations, is an extremely interesting review on nutrition/development, and this and other FAO publications are on sale throughout the world. The price of a subscription to CERES for one year is £2.50.
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The Food and Agriculture Organization
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Italy.

CONTACT 23 – A GUIDE TO NUTRITION REHABILITATION, by Joan Koppert, SRN, SCM, published by the CMC in October 1974, may also be of interest to those readers who have not yet seen it. Copies are available free of charge from:

The Christian Medical Commission,
World Council of Churches,
150, route de Ferney,
1211 Geneva 20,
Switzerland.

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